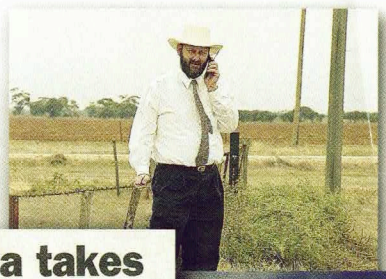
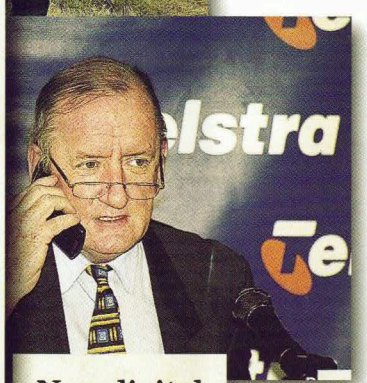
Analogue update

A special bulletin for analogue customers from Telstra MobileNet®

CDMA given thumbs-up in rural trial.

On 18 March 1999, Telstra conducted its first public demonstration of the new CDMA network in Swan Hill. The first official call on the CDMA network was made that day from Swan Hill by the Deputy Prime Minister, Mr Tim Fischer, who spoke to Dr Ziggy Switkowski, Telstra's Chief Executive Officer, in Melbourne.





Telstra takes bush into 21st century

By JOHN MASANAUSKAS, technology reporter

Tim Fischer

TELSTRA yesterday announced the successful dtesting of its new $400 million mobile-phone network for regional and rural Australia.

The digital CDMA system will replace the old analogue network, which will be phased out by the end of 2000.

Deputy Prime Minister Tim Fischer made the network's first official call during a visit to Swan Hill, where Telstra engineers have been testing the hi-tech system for two months.

Mr Fischer called new Telstra chief executive officer Dr Ziggy Switkowski in his Melbourne office.

Mr Fischer said the difference between CDMA and analogue was like comparing Rolls-Royce with Cobb and Co.

Telstra has guaranteed the CDMA network will be rolled out before the existing analogue service is removed.

CDMA — code division multiple access — uses improved digital technology.

It offers similar network coverage to analogue, but the calls are much clearer and totally secure. And unlike analogue, the new system will have access to fax and data services.

CDMA will be operating commercially from October and the analogue system will start closing down on December 31.

Telstra's group managing director (products and marketing), Lindsay Yelland, said testing showed CDMA outperformed analogue in most cases.

"It would be remiss of Telstra if we had not introduced CDMA because rural Australia could have been left with an analogue mobile-phone system that cannot cope as well with the data-rich world of today and tomorrow," he said.

SPACE TALK

DEPUTY Prime Minister Tim Fischer was labelled a CDMA cosmonaut by an enthusiastic Telstra executive in Swan Hill yesterday for making the first official call on the network.

Telstra's launch of its new mobile phone network came exactly 24 years after a Russian cosmonaut made the world's first space walk.

New digital thumbs-up

A SUCCESSFUL test, just completed, of the country's newest mobile technology will allay fears of rural telephone users, Telstra hopes.

Telstra's $400 million code-division multiple-access (CDMA) digital network passed its two-month rural trial yesterday.

Deputy Prime Minister Tim Fischer said CDMA technology would exceed the abilities of the analogue phone service, with wider coverage

Herald Sun 19/3/99

Yelland said the Swan Hill trials proved CDMA "a more-than-worthy replacement for analogue".

❑ JAMES RILEY
NICOLE MANKTELOW

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Telstra is the only carrier building a national CDMA network. While we are continuing to test CDMA technology in different terrains and environments, including marine testing, the Swan Hill demonstration was the first time media and independent observers had been invited to participate.

The trial. Because many of our analogue customers either live in rural or regional areas, or travel frequently in these areas, it was important that CDMA prove to be a comparable alternative to analogue.

Using a specially equipped van, the trial encompassed three tests conducted over an eight hour period, covering a distance of around 530 kilometres. During this time, direct comparisons were made of voice quality and coverage between CDMA and analogue phones in a number of typical usage situations.

Why Swan Hill? Because the aim of the testing was to compare analogue and CDMA performance, the testing had to be done in an area that would prove challenging to CDMA technology.

A thriving town in the heart of a mixed farming and horticultural district in Victoria's north-west, Swan Hill was chosen for its flat, generally even terrain that allows the analogue network to work as well as it possibly can.

> Mr Fischer said the difference between CDMA and analogue was like comparing Rolls-Royce with Cobb and Co.

The results. In all three tests, CDMA outperformed analogue in terms of voice quality. In two out of three tests, CDMA outperformed analogue with greater coverage whilst maintaining high voice quality.

The general consensus of everyone there on the day was that CDMA will indeed be an excellent replacement for analogue.

Sydney 2000 Official Partner

Telstra Making life easier™

How will CDMA handsets compare with digital GSM handsets?

If there's been one thing analogue customers have been looking forward to when they change networks it's a smaller, smarter, lightweight phone.

So for many, the attraction of CDMA may be tempered by the question of whether CDMA handsets offer as many features as digital handsets.

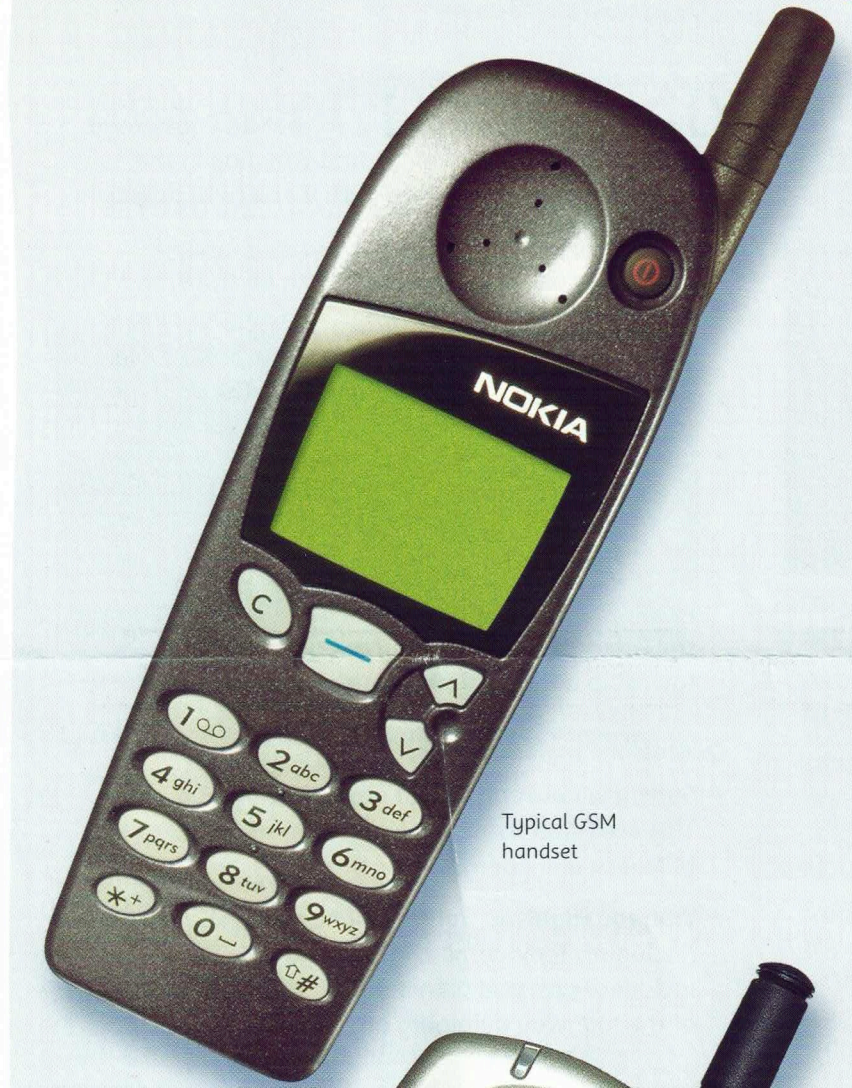
The answer is yes. Just like digital phones, CDMA phones will be smaller, lighter and compare favourably in performance and features, as shown by the table below. CDMA handsets will also be similarly priced to digital.

One of the advantages CDMA handsets have over digital handsets is that they are dual mode. This means they can move between the analogue network and CDMA network.

As these handsets will be available prior to the analogue network closing, this will be an added advantage. However, a CDMA handset will not work on the digital network, and vice versa.

Of the network services mentioned in this table, ***Easycall***®, ***MessageBank***® and Calling Number Display will be available when CDMA is launched, while text messaging and fax and data will be introduced soon after.

	Digital GSM	CDMA dual mode
Multi-line display screen	✓	✓
Short Message Service (SMS)	✓	✓
MessageBank	✓	✓
Calling Number Display	✓	✓
Easycall Call Waiting, Call Forward, Conference Call	✓	✓
Fax & Data capable	✓	✓
Clock	✓	✓
Easy Menu Guide	✓	✓
International Roaming	✓	
Talk Time	up to 156 mins with 900 mAh battery	up to 210 mins with 750 mAh battery in CDMA mode
Standby Time	up to 160 hours with 900 mAh battery	up to 60 hours with 750 mAh battery in CDMA mode



Typical GSM handset

Typical CDMA handset

Dual band and dual mode. What's the difference?

You may have heard the words 'dual band' in connection with digital handsets and 'dual mode' in connection with CDMA handsets. So what's the difference?

The ***MobileNet***® Digital network operates over two frequency bands to ensure we have the capacity to handle call traffic. Dual band refers to the digital GSM handset's ability to switch between two frequency bands on the same network.

In the case of dual mode, this is the CDMA handset's ability to switch between the analogue network and the new CDMA network. So while the analogue network is still in operation, your CDMA phone will automatically choose the best coverage option, depending on availability.

When I move to CDMA, can I keep the new digital number Telstra gave me which I am already using with my analogue phone?

No, you will need a new CDMA number. This will begin with a new prefix of 0427, 0428 or 0429, and be followed, where possible, with the same last 6 digits as the Telstra digital number you're currently using. However, if this isn't possible, we'll recommend the next best available match to these 6 digits.

Six months' free number re-direction will be available for both your existing Telstra analogue number and allocated digital number, if necessary. If you need re-direction for longer than six months, for a $4 monthly charge, you may have your calls redirected for a further nine months.

CDMA – coming soon.

For most of you, the biggest question is when will CDMA be available. The areas listed below are where the new Telstra CDMA network will be introduced first.

During the third quarter of 1999

Sydney greater metropolitan and surrounding areas to:

- Port Stephens on the Pacific Highway
- Branxton on the New England Highway
- Lithgow on the Great Western Highway
- Bomaderry on the Princes Highway
- Berrima/Moss Vale on the Hume Highway.

Melbourne greater metropolitan and surrounding areas to these boundaries:

- South: Bass Strait area from Lorne in the west to San Remo in the east
- East: San Remo to Lang Lang on the Bass Highway, Garfield on the Princes Highway and north to Powelltown, Warburton, Launching Place and Healesville on the Maroondah Highway
- North: Healesville in the east, along the Great Dividing Range to Kinglake, Upper Plenty, Pretty Sally on the old Hume Highway, Romsey, south of Mt Macedon and Trentham
- West: From Trentham and Ballan on the Western Highway, Anakie and Inverleigh on the Midlands Highway, Winchelsea on the Princes Highway to Lorne in the south.

Brisbane greater metropolitan and surrounding areas which include:

- Redcliffe, Caboolture, Ipswich and the Gold Coast areas
- north from Brisbane, past Caboolture to Woodford and Beerwah
- east to North and South Stradbroke, Morton and Bribie Islands
- west to Mt Glorious and Fernvale, Lowood, Marburg, Rosewood, Harrisville, Aratula, Boonah, Beaudesert and Kooralbyn
- south into northern NSW, including Tweed Head, Murwillumbah, Kingscliff, Pottsville, Brunswick Heads and Mullumbimby.

Perth greater metropolitan and surrounding areas, including:

- as far north as Yanchep, Two Rocks and Bullsbrook to the east past Sawyers Valley
- south-east as far as Dwellingup, south of Pinjarra, and south to Lake Clifton.

Adelaide greater metropolitan and surrounding areas:

- from Port Wakefield in the north to Yankalilla in the south. Eastern boundary includes the majority of the Adelaide Hills.

By October

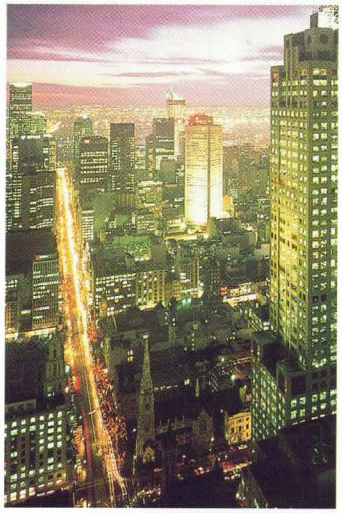
The ACT:

- the ACT and Queanbeyan areas as far as Hall to the north-west and Williamsdale to the south.

NSW regional areas:

- the ACT to the NSW skifields, including from Williamsdale/Michelago to Cooma on the Monaro Highway through to Jindabyne via Jindabyne Road
- Sydney to the ACT, including Berrima and Moss Vale to Goulburn along the Hume Highway, and from Goulburn to the ACT along the Federal Highway
- Great Western, Mid Western and Mitchell Highways, including Lithgow, Wallerawang, Bathurst, Cowra, Forbes, Parkes, Dubbo, Orange, Boree, Manildra, Mudgee and Gulgong
- from Ballina to Casino on the Bruxner Highway, Kyogle and connecting roads towards Casino and the coast, Woodburn and Evans Head along the Pacific Highway up to Coolangatta and Tweed Heads at the Queensland border to join with the CDMA network in its south-east corner, (see Queensland regional areas).

Victoria regional areas:



- central Victoria and the eastern Mallee area bounded by the Great Dividing Range and the Melba, Midlands, Goulburn Valley and Murray Valley Highways to Swan Hill, Calder Highway to Bendigo and McIvor Highway and Northern Highway to Kilmore
- includes Marysville, Mansfield, Yea, Benalla, Euroa, Seymour, Broadford, Shepparton, Kyabram, Echuca, Nagambie, Murchison, Elmore, Cohune, Kerang, Swan Hill, Bendigo, Heathcote, Inglewood and Rochester.

South Australia regional areas:

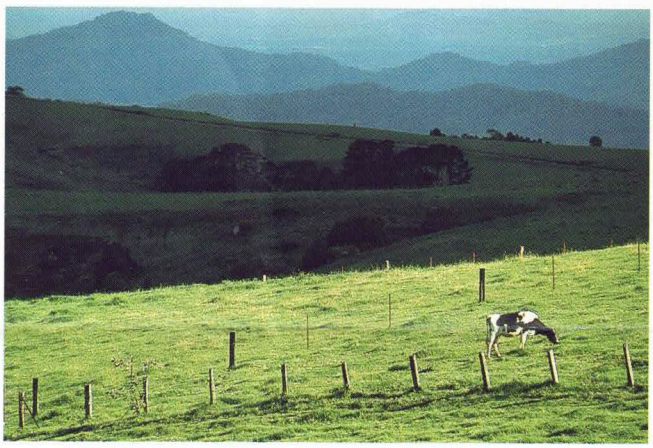
- Iron Triangle, along the Eyre Highway, past Iron Knob in the west. Limited coverage to the south-west on the Lincoln Highway by the Middleback ranges, around 50km north along the Stuart Highway and overlapping with the The Bluff coverage area, including Port Augusta and Whyalla. Coverage is limited by the Southern Flinders Ranges near Stirling North down to Nectar Brook
- entire Yorke Peninsula from Edinburgh in the south to Port Broughton in the north, across to the Northern Mt. Lofty Ranges, through Blyth and onwards to Clare and the Clare Valley
- Port Wakefield and surrounding areas, from Mallala in the south to Kulpara and Middle Range in the north, and from the Yorke Peninsula in the west to Balaklava in the east
- from Currency Creek to the Southern Fleurieu Peninsula in the north-east through to Newland Hill in the south-west and from Hindmarsh Valley in the west to Hindmarsh Island east of Goolwa, including Victor Harbour, Port Elliot, Middleton
- from Second Valley in the north to the southern end of the Fleurieu Peninsula, south to the ridge around 5kms east of Cape Jervis, including Penneshaw, American River, Kingscote and the east of Kangaroo Island
- Mt Gambier and around 20km south towards the coast, not as far as Port MacDonnell, and limited by the forest to the west, north and east to around 15km.

Western Australia regional areas:

- Harvey – south from Myalup on the Old Coast Road to Lake Clifton in the north, and Wokalup in the south to Waroona on the South Western Highway in the north
- Gin Gin – main township and north on the Brand and Great Northern Highways, and surrounding countryside
- Lancelin – main township and Lancelin Road
- Merredin – main township, including Great Eastern Highway as far as Doodlakine in the west and Burracoppin in the east
- Northam – main township to Goomalling in the north-west, Cunderdin in the west, and east along the Great Eastern Highway to Bakers Hill. York township and surrounding areas.

Queensland regional areas:

- Sunshine Coast up to, but not including Gympie. This area stretches from Landsborough in the south to Noosa and Cooroy in the north
- Warrego Highway from Brisbane to Roma (including Toowoomba, but not Dalby). This includes Miles and Chinchilla, as well as sections of the highway adjoining all three towns.



- Esk and Kilcoy, including the D'Aguilar Highway between Kilcoy and Moore, as well as the Brisbane Valley Highway to Toogoolawah
- New England Highway from Toowoomba South to the NSW border, including the Warrego Highway to Gatton in the east and west to Oakey, as well as south through Allora, Warwick and Stanthorpe. Includes the Cunningham Highway from Brisbane to Warwick
- Pittsworth and the Gore Highway between Toowoomba and Millmerran.

STOP PRESS

CDMA goes the distance.

Telstra recently completed field testing the CDMA Extended Cell network feature in both a remote rural and marine location in New South Wales.

The remote rural test achieved CDMA coverage at distances of up to 120km from the test base station, which compared favourably with analogue.

The marine test was conducted on a boat over a range of distances using a CDMA handheld phone in a standard car kit, without booster. CDMA calls were achieved over water at distances in excess of 130km from the test base station.

CDMA handheld calls were made in both rural and marine tests at distances in excess of 100km from the test base station. CDMA, yet again, proved itself a worthy replacement for regional and rural customers who currently rely on the analogue network for extended coverage.

I don't think my analogue phone can make it!

If your analogue phone really needs to be replaced now, you have two options open to you.

You can change to one of the digital GSM networks right now. With MobileNet Digital, access fees begin from as little as $10 per month and there are a range of low price digital handsets and price packages to choose from. You'll also pay no connection fee (a saving of $65) if you're swapping from MobileNet Analogue and connecting to digital under the same account name.

However, if you're looking for comparable analogue coverage in rural areas, then CDMA is your best option. In this case, it's probably a good idea to consider buying a secondhand analogue phone in the interim. Prices for these phones are generally low, as they will be obsolete once the network closes.

If you're not sure whether CDMA or digital GSM is best for you, compare your analogue coverage map with a digital coverage map. If the areas where you're most likely to use your mobile have no digital GSM coverage, then it may be worth waiting for CDMA.

Please remember when looking at coverage maps of any cellular system that there are places inside the marked coverage areas where a mobile phone may not work due to a variety of factors.

Most of the analogue mobile network will close on 31 December 1999.

If you currently use an analogue mobile phone, and wish to continue using a mobile after 31 December 1999, you should change to another type of mobile service.

The majority of the analogue network will close on 31 December 1999, including most metropolitan areas. In some regions, including Tasmania and the Northern Territory, analogue services will continue for several months. This remaining service will close during the year 2000.

The analogue network is being replaced by reasonably equivalent mobile services.

For more information, call the ACA Analogue Closure Hotline on 1800 351 135, or visit the ACA website at www.aca.gov.au

Australian Communications Authority

We'll keep you updated.

As we mentioned in the last update, Telstra will keep you informed about the CDMA network's introduction throughout the year.

For those of you who visited our website at the time the last update was released, you'll know that there was a problem with access, and we apologise for this. But now we can assure you, you'll find CDMA information on the Internet at www.mobilenet.telstra.com.au

Between our web site and regular updates, you'll always have the latest CDMA news at hand. If you would like more copies of an Analogue Update issue, call MobileNet 24 hour Customer Service on 018 018 111 (no call charge*).

*No call charge when call is made from a Telstra service, except Telecard™.

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